



1550nm DFB narrow linewidth Butterfly Laser Module (14 pins)

GTA9014

Features

- High Linearity Direct Modulation DFB laser
- High Output Power (1544nm ~ 1555nm)
- Built-in Isolator,TEC, Thermistor and Monitor PD
- Hermetically Sealed 14 Pin Butterfly Package
- RoHs Compliant

Application

- Long Reach Analog Transmission Systems
- Light Source
- Sensor
- Optical Communication
- Test equipment



1 **Absolution Maximun Ratings (Tc=25°C.unless otherwise specified)**

Parameters	Symbol	Min.	Max.	Unit	Test Condition
Laser Chip	I _{FL}	-	1200	mA	Forward Current
	I _{RL}	-	2	mA	Reverse Current
Reverse Voltage (Laser diode)	V _{RL}	-	2	V	Reverse Current <500uA
Storage Temperature	Tstg	-40	+100	℃	-
Soldering Temperature/Time	-	260/10		℃/S	-
Relative Humidity	RH	-	95	%	Top < 30 ℃
Thermal Electric Cooler	-	-	2	V	Voltage
	-	-	1.5	A	Current
Fiber Yield Strength	-	-	30	nm	
Fiber Bend Radius	-	-	1	kgf	
Monitor Detector	V _{RD}	-	15	V	Reverse Voltage
	I _{RD}	-	1	mA	ReversePhoto Current
	I _{FD}	-	2	mA	Forward Current

2 **Operating Conditions**

Parameters	Symbol	Min.	Max.	Unit	Test Condition
Caser Operating Temperature Range	T _C	- 20	60	℃	-
Power Supply Voltage	V _{CC}	-	5	V	-
Relative Humidity	R _H	-	80	%	-
Bias Current	I _D	-	70	mA	-
TEC Cooler Current	I _{cooler}	-	2.4	A	ΔT=40K
TEC Voltage	V _{cooler}	-	2.9	V	ΔT=40K

3 **Specifications (electrical & optical characteristics)**

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Operating Voltage	V _{op}	-	1.2	1.5	V	CW,I _{th} +20mA
		-	2.5	3.5		CW,I _{th} +400mA,TEC
Threshold Current	I _{th}	-	10	45	mA	CW
Thermistor	R _{th}	9.5	10	10.5	KΩ	25 ℃
Monitor Current	I _m	10	-	150	uA	CW, V _{rd} = 5V





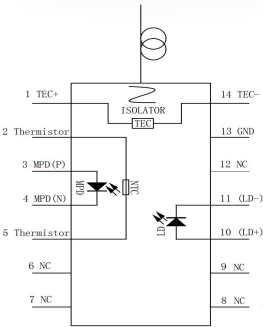
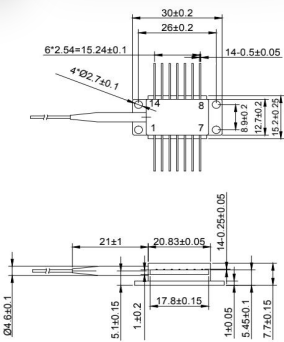
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Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Thermoelectric cooler current	Icooler	-	-	1000	mA	CW, -5 °C ~ 60 °C
Monitor Dark Current	Id	-	-	500	nA	CW, Vrd = 5V
Central Wavelength	λ_c	1544	1550	1555	nm	CW, 25 °C
Output Power	Po	4	-	6	mW	CW, Ith + 20 mA
		40	-	60		
		60	-	100		
Side Mode Suppression Ratio	SMSR	30	-	-	dB	CW, If = Ith + 20 mA
Slope Efficiency	Se	-	0.3	-	mW/mA	CW
LineWidth	Lw	-	-	200	KHz	CW,Ith +300mA,TEC
Bias Current	IB	-	-	70	mA	-
Relative Intensity Noise	Rin	-	-166	-155	dB /Hz	CW,Ith + 300mA, TEC @1GHz
Tracking Error	ΔP_f	-	-	0.5	dB	CW,-5 °C ~ 60 °C, Im =Im @25 °C
Monitor PD Capacitance	C	-	-	0.5	pF	Vrd = 5 V, F = 1 MHz
Connector Repeatability		-	-	0.3	dB	CW
Frequency Range	F	45	-	1000	MHz	-
Tracking Error	Er	-	-	1	dB	Tc = - 20 ~ 65 °C, APC, ATC
Rise Time / Fall Time	Tr / Tf	-	-	2.0	ns	10-90% / 90-10%

- * CWDM DFB wavelength tolerance $\pm 3\text{nm}$.
- * LAN-WDM.MWDM.DWDM wavelength tolerance belongs to their specific properties.
- * 1625nm.1650nm.1654nm wavelength tolerance $\pm 5\text{nm}$.

4 Dimensions(mm) Pin Assignment



 Please let us know your request details before order.
 ** If you have your own Pin Assignment request . Kindly share it with us before order .



Customize for you



5 Order Information

GTA9014 series laser 1550nm DFB narrow linewidth Butterfly Laser Module

- Please let us know
- 1:output power
 - 2: fiber type
 - 3: connector
 - 4: pin map (If you have your own request,please let us know it.)
 - 5: with isolator or not



GTA90141095
 1550nm DFB narrow linewidth butterfly laser moudle 100mW.PMF FC/APC 1m, with isolator, slow axis.

